

A REVISION OF THE *EUSELASIA ORFITA* COMPLEX (RIODINIDAE)

CURTIS J. CALLAGHAN

Avenida Suba 130-25, Casa 6, Bogota, Colombia

ABSTRACT. The *Euselasia orfita* complex (Riodinidae) *sensu* Stichel 1919 is revised. Separate keys to adult males and females are presented, as well as notes on nomenclature, geographical variation, distribution and adult habits. As revised, this complex includes: *E. orfita* (Cramer 1777); *E. eutychnus* (Hewitson 1856) **reinstated status**, =*E. ferrugo* (Bates 1868) **new synonym**; *E. cuprea* Lathy 1926 **reinstated status**; *E. cyanira* **new species**; *E. clithra* (Bates 1868), =*E. clithra jugata* Stichel 1919 **new synonym**; and *E. phedica* (Boisduval 1836).

Additional key words: neotropical, South America, Brazil, Colombia, Peru, Ecuador.

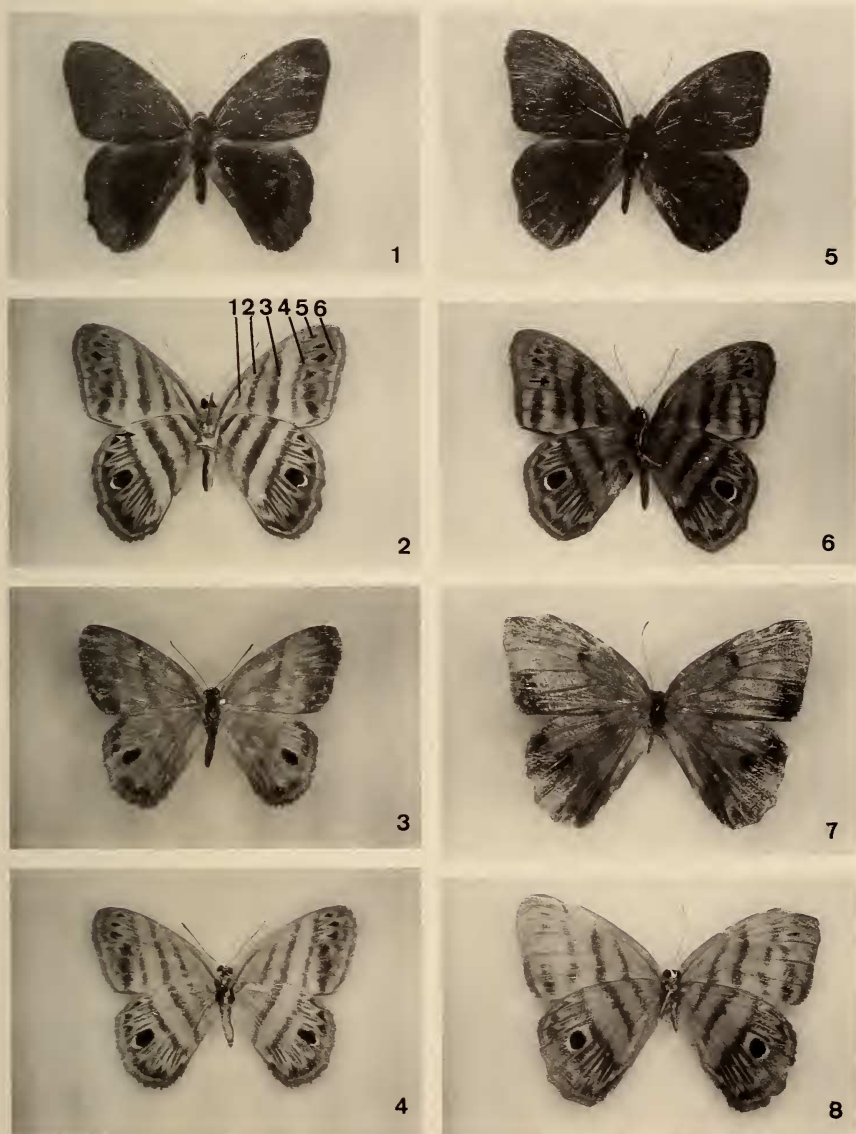
The purpose of this paper is to revise the *Euselasia orfita* complex (Riodinidae), a small assemblage of species inhabiting South America east of the Andes. Although common in museum collections, these species are difficult to identify because they are similar in appearance, especially females. This revision is preliminary because other *Euselasia* species may belong to the *E. orfita* group. For this reason, a phylogeny will be attempted only later, when confidence about the systematics of this large and varied genus is on a firmer foundation.

MATERIALS AND METHODS

In addition to the author's collection (CJC), the following institutional collections were consulted during this study: Museu Nacional, Rio de Janeiro (MN); Smithsonian Institution, Washington D.C. (NMNH); Museum National d'Histoire Naturelle, Paris (MNHN). A total of 256 specimens was examined, including 36 specimens taken on loan. Thirty eight genitalic preparations were made by soaking the abdomens overnight in 10% potassium hydroxide solution; genitalia were stored in vials cross referenced to the specimens. Terminology of the genitalic structures follows Klots (1970), and the designation of wing veins and cells follows Miller (1969). Measurements were made using a binocular microscope fitted with an ocular micrometer. Field observations were made by CJC unless otherwise indicated.

MORPHOLOGY OF THE *EUSELASIA ORFITA* COMPLEX

The species of the *E. orfita* complex are easily separated from other *Euselasia* by their large size (forewing length 17-24 mm), and the series of parallel dark red/brown bands that cross the ventral surface of both wings. Other distinguishing characteristics of the complex are as follows:



FIGS. 1-8. Adults of *Euselasia orfita* complex. 1, *E. orfita*, dorsal, male (Brazil); 2, ventral, male, showing numbering of bands; 3, dorsal, female (Brazil); 4, ventral, female; 5, *E. cuprea*, dorsal, male; 6, ventral, male; 7, dorsal, female; 8, ventral, female;

Dorsal wing pattern. The male dorsal wing pattern characterizing the *E. orfita* group can best be seen using light projecting from behind the viewer's shoulder, with specimens tilted away from the viewer from the apex towards the base of the wings. There are three distinct arrangements of iridescent blue scaling on the forewing. In the first, the color is deep purple and confined to the basal half (Fig. 1). In the second, the color is lighter blue

and the pattern consists of a wide >3 mm band beginning at the costa above the cell, that curves around the end of the cell and terminates at the inner margin, and with darker blue-violet between the band and the base; the distal area lacks iridescent scaling (Fig. 9). In the third, there is a thin band 1 mm wide beginning at the base that continues along the margin to distad of the cell, and then crosses the wing as a 2 mm wide band to the inner margin, with dark blue scaling on both forewing and hindwing separated from the thin band by a black area (Fig. 21).

The pattern on the hindwing likewise consists of three types: a deep purple tone in the distal half (Fig. 1); a marginal band of light blue scales (Fig. 9); or a white limbal area with a glossy light blue sheen (Fig. 25).

Ventral wing pattern. The *E. orfita* group is characterized by a ventral forewing pattern that includes six bands crossing the forewing from the costal margin to 2A, and the hindwing from the costa to the inner margin. These are numbered 1-6 from the base to the submargin in Fig. 2. Bands 1-4 are reddish brown and band 1 is thinner and shorter. The first three bands are slightly convergent toward the forewing costa. Band 5 is broken into a series of figures consisting of spots and lines, and band 6 follows the margin of both wings as a distinct band or shading. The bands are the principal means of associating the sexes.

On the forewing, the shape of band 4 may be straight (Fig. 10) or S-shaped (Fig. 6) in both sexes. Band 5 begins as three arrow-shaped spots in cells R_3-R_4 , R_4-M_1 , and M_1-M_2 , followed by a wide band between M_3 and 2A on the inner margin. The band between M_3 and 2A has three types: a straight heavy line to 2A, veering basad to the inner margin as a thin projection (Fig. 2); a band curved towards the costa, uniting with band 4 at M_3 (Fig. 6); straight as above, but not reaching below 2A (Fig. 10).

The ventral hindwing is characterized by the continuation of bands 1-4 from the forewing. Band 5 becomes a series of arrowhead-shaped spots pointing basad between the veins, with a blue ocellus in cell M_2-M_3 , bordered on three sides with orange and distad by white. The distance between the ocellus of the hindwing ventral surface and band 3 differs significantly between species, and is greater in females.

Genitalia. The male genitalia (Figs. 29-34) are simple with a broad bilobed uncus widely separated from the tegumen, the latter with two narrow falces and joined to the valvae by a long, thin vinculum. The saccus consists of a widening of the base of the vinculum. The valvae are elongate, spatula-shaped with flat tips and a heavily sclerotized process near the base. The aedeagus is blunt or pointed, with a coiled vesica and is guided by a sclerotized triangular-shaped transtilla. There is considerable intraspecific variation.

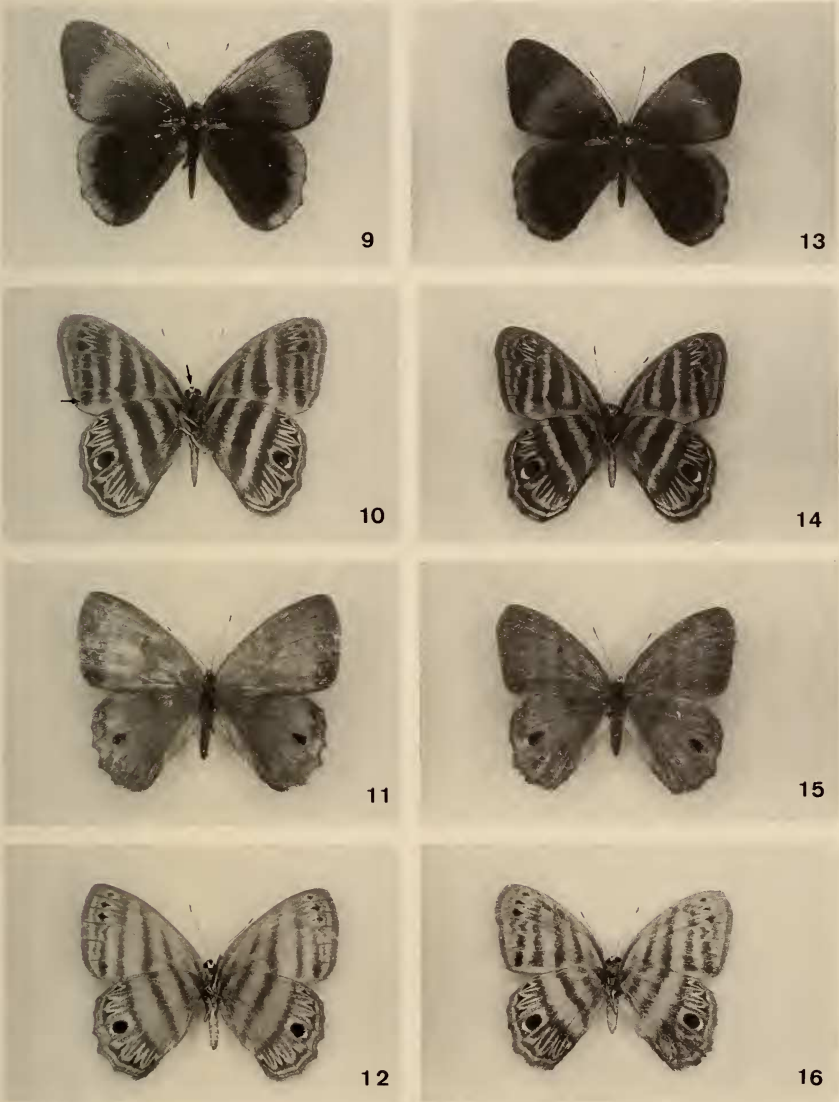
In the female genitalia (Figs. 35-39) the lamella postvaginalis is bladelike with a small point between the two blades. The posterior ductus bursae has two tiny crescent-shaped signa. There appeared to be considerable differences among the genitalia examined; however, the number of preparations was insufficient to separate specific from individual variation with confidence.

Frons and palpi. The lateral margins of the frons and palpi are either dirty yellow or white.

Geographic distribution. The *E. orfita* complex is limited to tropical South America east of the Andes from the Guianas across the Amazon basin to Peru (Bolivia?). In the Andes the complex occurs up to 1000 m (Fig. 40).

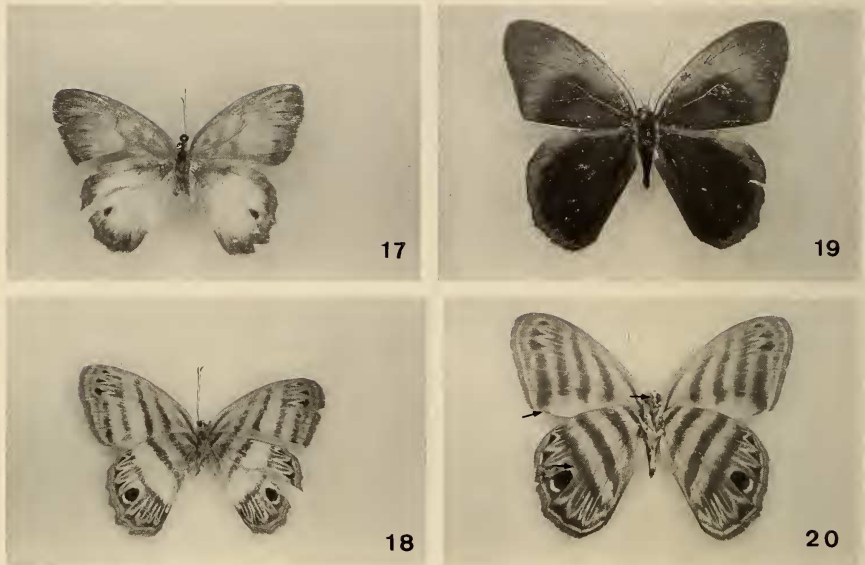
PROPOSED CLASSIFICATION

In his revision of *Euselasia*, Stichel (1928) recognized nine species in this complex (Orfitoformes): *E. orfita* (Cramer), *E. ferrugo* (Bates), *E. clithra* (Bates), *E. phedica* (Boisduval), *E. eurymachus* (Hewitson), *E. eurysthenes* (Hewitson), *E. orba* Stichel, *E. issoria* (Hewitson) and *E. euodia* (Hewitson). Examination of the latter five species suggests that they are not related to the *Euselasia orfita* complex. They lack the six band pattern on the wing ventral surface typical of *E. orfita*. On



FIGS. 9-16. Adults of *Euselasia orfita* complex. 9, *E. eutyclus*, dorsal, male (Brazil, AM); 10, ventral, male; 11, dorsal, female (Brazil, AM); 12, ventral, female; 13, dorsal, male (Brazil, PA); 14, ventral, male; 15, dorsal, female (Brazil, PA); 16, ventral, female.

E. eurymachus and *E. eurysthenes* the tips of the valvae are bifurcated with the lower projection longer and turned inwards, a characteristic of the *Euselasia anica* complex (*Aniciformes sensu* Stichel). Although the male genitalia of *E. orba*, *E. euodia* and *E. issoria* are close to *E. orfita*,



FIGS. 17-20. Adults of *Euselasia orfita* complex. 17, *E. eutyclus*, female (Brazil, PA); 18, ventral, female; 19, *E. cyanira*, holotype, dorsal; 20, ventral.

the wing pattern suggests that they form a distinct monophyletic group. Thus, all five taxa are omitted from consideration in this paper. The following classification for the *E. orfita* complex is proposed:

E. orfita (Cramer 1777)

=*E. orfita eutyclus* f. *truculenta* Stichel 1924

E. eutyclus (Hewitson 1856), **reinstated status**

=*E. ferrugo* (Bates 1868), **new synonym**

=*E. dyrrhachius* Seitz 1913

=*E. eutyclus* f. *lacteata* Stichel 1919

=*E. orba spectralis* f. *pallida* Lathy 1926

E. cyanira, **new species**

E. cuprea Lathy 1926, **reinstated status**

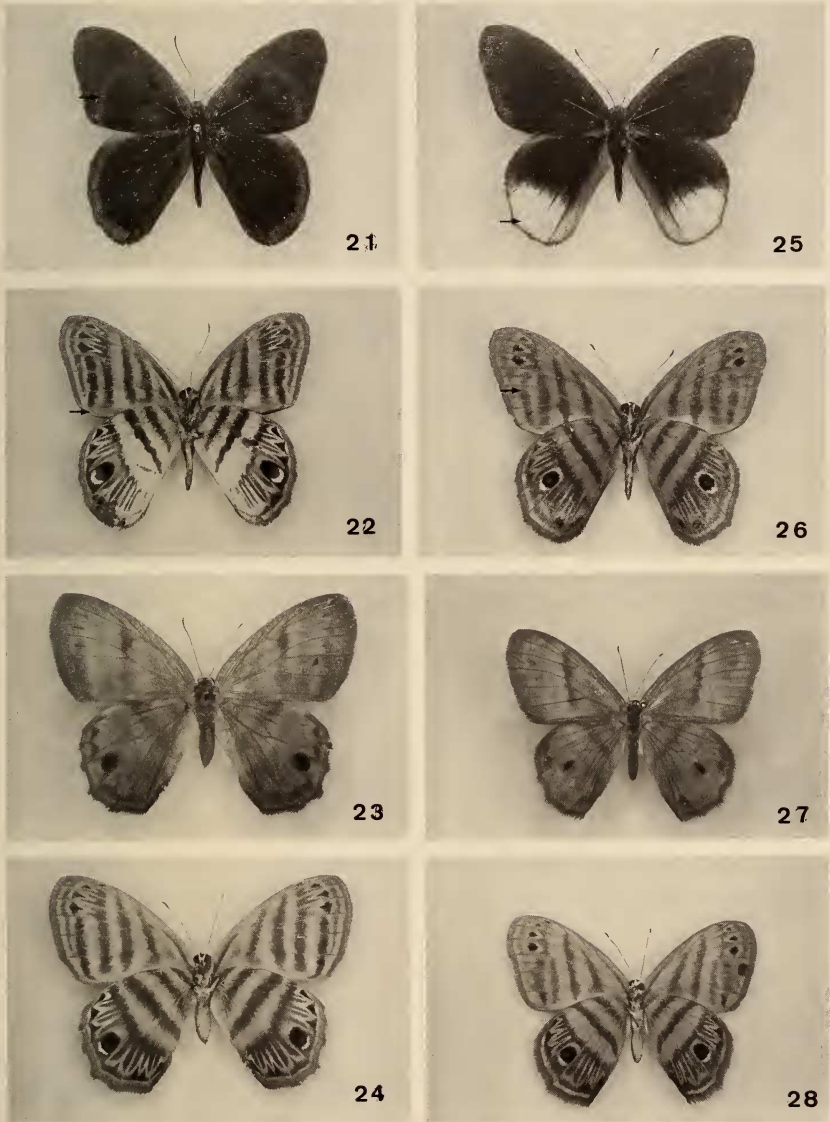
E. clithra (Bates 1868)

=*E. jugata* Stichel 1919, **new synonym**

E. phedica (Boisduval 1836)

KEY TO MALES OF THE *E. ORFITA* COMPLEX

- | | |
|--|---|
| 1a. Dorsal forewing with a blue band across forewing from end of cell to inner margin..... | 4 |
| 1b. Dorsal forewing dark purple with no transverse band..... | 2 |
| 2a. On ventral surface of forewing, space between lines three and four lighter than | |



FIGS. 21-28. Adults of *Euselasia orfita* complex. 21, *E. clithra*, dorsal, male (Brazil, PA); 22, ventral, male; 23, dorsal, female (Brazil, PA); 24, ventral, female; 25, *E. phedica*, male (Fr. Guiana); 26, ventral, male; 27, dorsal, female (Fr. Guiana); 28, ventral, female.

ground color; line four straight, line five to CU_2 ; distance between ocellus and third band 0.8-1.0 mm; valvae short, flat, tips rounded. *E. orfita*
 2b. On ventral surface of forewing, ground color uniform; line four S-shaped; line five curved from $2A$ to M_3 ; line five to M_3 3

- 3a. Hindwing dorsal surface black with dark blue margin; ocellus distance 0.7–1.0 mm; valvae wide, tips flat, spatula-shaped. *E. cuprea*
- 3b. Hindwing dorsal surface with white limbal area; line three on ventral forewing S-shaped; line four curved and yellow; line five reaches M_3 ; ocellus distance 0.3–0.8 mm; valvae very short, slightly flattened. *E. phedica*
- 4a. Forewing with wide >3 mm blue band crossing discal area to inner margin 5
- 4b. Forewing with thin <3 mm blue band from base to end of cell, then crossing wing to tornus; ventral forewing line five wide to 2A, then turning basad as a thin line to inner margin; populations in eastern Amazon basin with bands three and four more widely separated with white scaling; ocellus distance 0.8–1.8 mm; valvae long, round, slightly curved inwards, tips rounded. *E. clithra*
- 5a. Facial sutures white; dorsal wing surface with ventral surface markings showing through; ventral surface covered uniformly with a blue glaze; line four reaching beyond 2A as thin line turning basad to inner margin; ocellus distance 0.7–1.1 mm; valvae like *E. clithra*, slightly longer *E. cyanira*
- 5b. Facial sutures yellow; dorsal wing surface opaque; ventral surface blue glaze confined to base of forewing and anal angle of hindwing; line four stopping at 2A; ocellus distance 0.5–0.9 mm; valvae very long, narrow, tips pointed and turned inwards *E. eutyclus*

KEY TO FEMALES OF THE *E. ORFITA* COMPLEX

- 1a. Ventral forewing lines four and five curved costad, meeting at M_3 2
- 1b. Ventral forewing lines four and five straight. 3
- 2a. Ventral hindwing ocellus in cell M_2 – M_3 round, less than 0.9 mm from band four; band four on forewing yellow; dorsal grey-blue; ocellus distance 0.96 mm *E. phedica*
- 2b. Ventral hindwing ocellus in cell M_2 – M_3 <1.1 mm from band three; band four on forewing reddish brown; dorsal brown; ocellus distance 1.1 mm *E. cuprea*
- 3a. Palpi, facial sutures yellow; ocellus on ventral hindwing <1 mm from band four; dorsal hindwing ocellus arrowhead-shaped; individuals may have white discal area ventrad or dorsad; ocellus distance 0.7–1.0 mm *E. eutyclus*
- 3b. Palpi, facial sutures white; ocellus on ventral hindwing <1 mm from band four 4
- 4a. Dorsal hindwing with yellow scaling around ocellus; ventrally with ground color between bands three and four slightly lighter; forewing lines five and six wide, broken, indistinct; ocellus distance 1.2–1.4 mm *E. orfita*
- 4b. Dorsal hindwing without yellow scaling; ventral forewing bands five and six narrow, of uniform width, unbroken; ground color uniform; ocellus distance 1.6–2.1 mm *E. clithra*

SPECIES ACCOUNTS

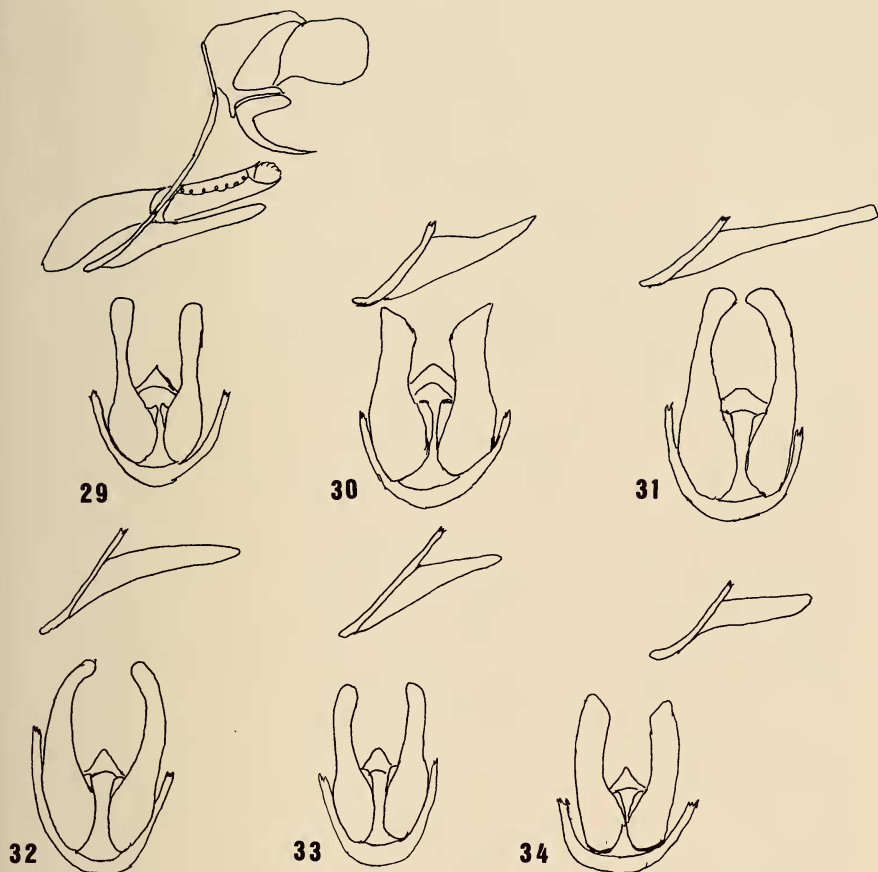
Euselasia orfita (Cramer 1777)

(Figs. 1–4, 29, 35)

Nomenclature. Cramer (1777) described *Euselasia orfita* from a male from Surinam. Figures D and E on his plate 112 are crude, but recognizable as *E. orfita*. The type apparently has been lost, and there is no specimen at Leiden that could be designated as a lectotype. However, the species is distinct.

Geographical Variation. The species shows little variation over its range from the Guianas to Brazil (Para, Amazonas). A single female from “Santa Cruz Bolivia” at the MNHN is probably mislabeled.

Ecology and Behavior. *Euselasia orfita* inhabits terra firme forests in the lowlands of the Amazon basin and the Guianas. Males are encountered rarely in the forests perching in the early afternoon in treefalls and other small clearings, resting under leaves near the ground with their wings closed. When searching for oviposition sites, female *E. orfita* often rest on the upper surfaces of leaves, and this habit, along with the barred wing undersides and loping flight, make it easy to confuse them with satyrids.



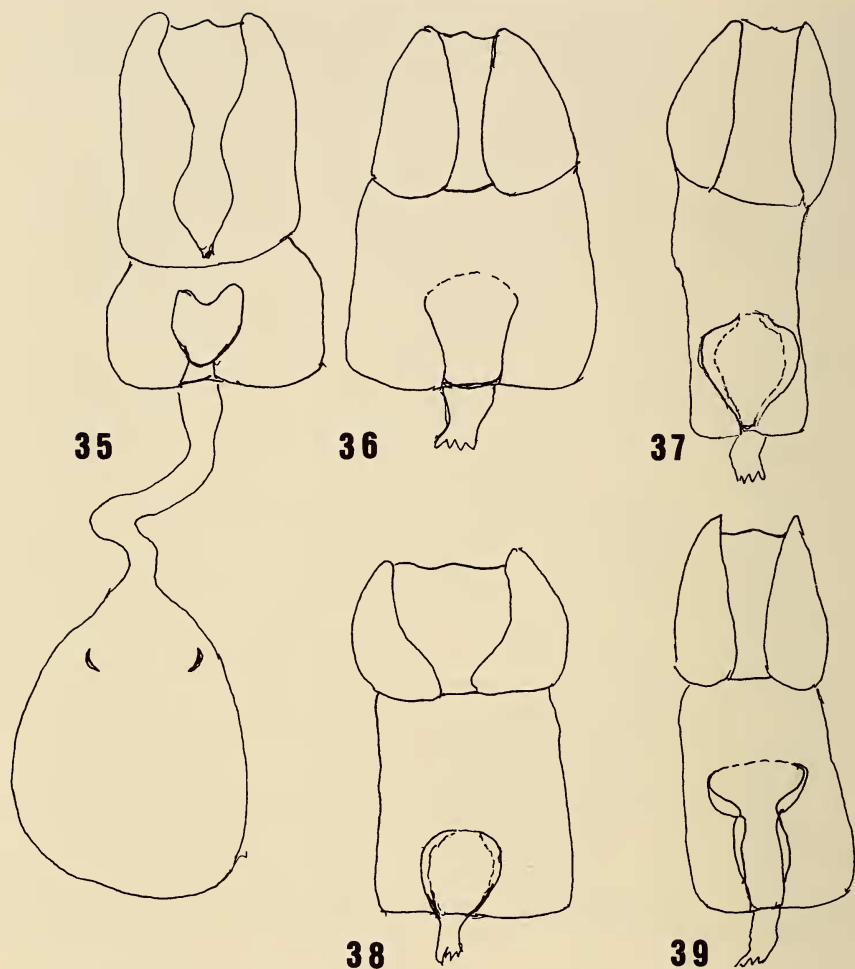
FIGS. 29-34. Male genitalia of *Euselasia orfita* complex. 29, *E. orfita*; 30, *E. cuprea*; 31, *E. eutyclus*; 32, *E. cyanira*; 33, *E. clithra*; 34, *E. phedica*.

Material Examined. FRENCH GUIANA: St. Elie pk 15.5 on D21, 7♂ (NMNH); Moyen Maroni, 1♂ (MNHN); Kana (Mana?), 1♂ (CJC); St. Laurent, 4♂ 1♀ (MNHN). BRAZIL: Obidos, Pa, 1♂ (NMNH), 3♂ (MNHN); Trombetas, Pa., 1♂ (MNHN); Tapajós, Pa, 1♂ (MNHN); Manaus, Am, 1♀ (MNHN); Tefé, Am, 1♀ (MNHN); 80 km N. Manaus, Am, 7♂ 4♀ (CJC). BOLIVIA: Santa Cruz, 1♀ (MNHN)(?).

Euselasia cuprea Lathy 1926, **reinstated status**
(Figs. 5-8, 30, 36)

Nomenclature. This species was described from a male, currently in the British Museum (Natural History). The type locality is St. Laurent, Maroni River, French Guiana. Stichel (1928) treated *E. cuprea* a subspecies of *E. orfita*. However, the two are distinct morphologically, and sympatric.

Geographical Variation. The species is confined to the Guianas and shows no variation among the material examined.



FIGS. 35-39. Female genitalia of *Euselasia orfita* complex. 35, *E. orfita*; 36, *E. cuprea*; 37, *E. eutyclus*; 38, *E. clithra*; 39, *E. phedica*.

Ecology and Behavior: The species inhabits the terra firme forests of French Guiana. I have no personal experience with its habits.

Material Examined. FRENCH GUIANA: Rte. de l'Est, 1♂ (NMNH); St. Jean Maroni, 1♂ (NMNH); PK43.5 N2, 3♂ (CJC); Nouveau Chantier, 2♂ 2♀ (MNHN); "Guyane Française," 2♂ (MNHN); T. Laurent, 1♀ (MNHN); St. Domenti, 1♂ (CJC); Galion, 1♂ (CJC).

Euselasia eutyclus (Hewitson 1856), **reinstated status**
(Figs. 9-18, 31, 37)

=*Euselasia eutyclus* f. *pallida* Lathy 1926

=*Eurygona ferrugo* (Bates 1868)



FIG. 40. Geographical distribution of the *Euselasia orfita* complex. Filled circles = *E. orfita*, filled triangles = *E. eutyclus*, filled squares = *E. phedica*, open circles = *E. clithra*, open triangles = *E. cyanira*, open squares = *E. cuprea*.

=*Euselasia dyrrachius* Seitz 1913

=*Euselasia orba spectralis* f. *lacteata* Stichel 1919

Nomenclature. Hewitson (1856) described *E. eutyclus* from a male, presently in the British Museum (Natural History), with the label indicating "Amazon" as the locality. His figures 44 and 46 are good representations of the species. Stichel (1919) placed *E. eutyclus* as a subspecies of *E. orfita* with no explanation. As in the case of *E. cuprea*, this was in error, as the two are distinct morphologically, as well as partially sympatric.

Geographical Variation. There is significant variation both within and between populations of *E. eutyclus* from Pará and Amazonas, Brazil, south of the Amazon River, to the foothills of the Andes from Meta, Colombia, south to Peru. In males from Pará, band 5 converges sharply from the anal angle towards band 4; in males from Amazonas, Brazil, Peru and Colombia this band is parallel to band 4. In some males, bands 3 and 4 fuse

together (*ferrugo* Bates). Females show variability paralleling that of the males. Those from Pará are generally darker than those to the east and have wider bands. Some individuals have white ventral hindwing surfaces, and others have white on the discal area of the dorsal surface (*pallida* Lathy, and *lacteata* Stichel; Figs. 17–18). The white scaling is variable and is rare although present in all *E. eutychnus* populations.

Ecology and Behavior. *Euselasia eutychnus* is widespread, from Pará, Brazil, throughout the Amazon Basin to Peru. Unlike other members of the group, it adapts to disturbed habitats where it may be locally common. I have found the males perching in the late morning inside the edges of large clearings, resting on ventral leaf surfaces with their wings folded. Females are found less commonly within the forests.

Material Examined. BRAZIL: Jaru, RO, 3♂ (CJC); Cuiabá-Santarem km 1666, Pa, 4♂ (CJC), 1♂ 1♀ (NMNH); Vila Bela, MT, 1♂ (CJC); Vilhena, RO km23, 2♂ (CJC); Manaus, AM, 1♂ (CJC); Trombetas, Pa, 2♂ 1♀ (MNHN); Faro, Pa, 2♂ 1♀ (MNHN); Maués, Am, 1♂ (MNHN); Tefé, Am, 1♂ (MNHN); Conceição, Tapajós, Pa, 3♂ (MNHN); Santarém, Pa, 4♂ (MNHN); Tapajós, Pa, 2♂ (MNHN); Itaituba, Pa, 1♂ (MNHN); Amazon Sup., 2♂ 1♀ (MNHN); Vista Alegre, Rio Jurua Mirim, Acre, 1♂ (KB). COLOMBIA: Puerto Inirida, Putumayo, 1♂ (CJC); La Macarena, Meta, 1♂ (CJC); Leticia, Am, 2♂ (CJC); Villagarzon, Caquetá, 3♂; Rio Negro, Meta, 5♂ (CJC), 6♂ (NMNH); Villavicencio, Meta, 1♂ (CJC), 3♂ 2♀ (MNHN); Montanita, Caquetá, 1♂ (CJC), 2♂ (NMNH); Tres Esquinas, Caquetá, 3♂ 2♀ (NMNH); Putumayo, 8♂ (MNHN); Umbria, 1♂ (MNHN); Meta, nr. Villavicencio, 1♂ (NMNH). ECUADOR: Rio Jondachi, 1♂ (CJC); Puyo Pastaza 2♂ (CJC), 2♂ (NMNH); Cotundo Napo, 2♂ (CJC), 4♂ 1♀ (NMNH), 2♂ (MNHN); Limoncocha 3♂ (NMNH). PERU: Tingo Maria, 3♂ (CJC); Chanchamayo, 2♂ (NMNH); Iquitos, 2♂ (NMNH), 1♀ (MNHN), 6♂ (MNHN); Chanchamayo, 4♂ 2♀ (MNHN); La Merced, 2♂ 2♀ (MNHN); Rio Tono, 4♂ 2♀ (MNHN); Jepelacio, 1♂ (MNHN); Rio Perene, 3♂ (MNHN); Huancabamba, 1♂ (MNHN); Madre de Dios, 1♂ (MNHN).

Euselasia cyanira Callaghan, new species

(Figs. 19–20, 32)

Description. *Male:* legs yellow, palpi and facial sutures white; forewing length of holotype 22 mm (range of material examined 20–22 mm, n=7); dorsal surface of forewing ground color black, costal margin purple-blue from base to end of cell, continuing as a 4 mm wide lighter blue band to anal angle; hindwing ground color black, costa light brown, 2 mm wide marginal blue band from M_1 to anal angle; ventral pattern shows through to dorsal surface; ventral surface light grey with a light blue sheen, stronger at the anal angle; on forewing, band 1 is absent; bands 2–4 red/brown and parallel; band 5 broken into three arrow shaped spots in cells R_3 – R_4 , R_4 – M_1 and M_1 – M_2 , continuing as a wide band from M_2 to 2A, then as a thin line at an angle basad to the inner margin; band 6 distinct, reaching CU_2 ; margin light brown with black fringe; hindwing bands 2–4 are continuations of those on the forewing from costa to 2A; bands 2 and 3 slightly concave to the base; band 5 consists of elongated arrow-shaped spots pointing basad, two each in cells CU_1 – CU_2 and CU_2 –2A and the rest with one each, except cell M_2 – M_3 which contains an oval, black ocellus separated from line 3 by a yellow shading 0.87 mm wide and bordered distad by a short, white line; margin light grey with a 1 mm wide orange line distad, and a thin black line at base of fringe. *Female:* unknown.

Types. *Holotype:* male, with label "Pumayacu, Huallaga, Peru," and a red TYPE label. *Paratypes:* six males from Manaus, Amazonas and U. Putumayo, SE Colombia. The holotype and two paratypes are in the Museum d'Histoire Naturelle, Paris; one paratype is in the collection of the author; material will be distributed to the Museo Nacional, Rio de Janeiro and the USNM, Washington, D.C.

Genitalia. As illustrated (Fig. 32).

Geographical Variation. *Euselasia cyanira* ranges from Manaus, Brasil to Putumayo, Colombia then to central Peru, always in humid tropical lowland forest. All specimens examined are similar in appearance, suggesting that the species is quite uniform over its range.

Diagnosis. The dorsal surface of *E. cyanira* resembles closely that of *E. eutychnus* with

broader blue bands on the forewings. However, *E. cyanira* may be easily separated by its white rather than yellow facial sutures. Although the ventral surface of *E. cyanira* resembles that of *E. clithra*, hindwing bands 2 and 3 are slightly concave to the base in *E. cyanira* and straight in *E. clithra*. The wider blue band on the forewing of *E. cyanira* separates it from *E. clithra*.

Euselasia clithra (Bates 1868)

(Figs. 21–24, 33, 38)

=*E. clithra jugata* Stichel 1919, new synonym

Nomenclature. *Euselasia clithra* was described from a male captured in "Para, L. Amazonas" by H. W. Bates. The type specimen is in the British Museum (Natural History).

Geographical Variation. *Euselasia clithra* shows considerable clinal variation over its range from eastern Pará to the foothills of the Andes south of the Amazon and Rio Negro rivers. The males from Pará, nominate *E. clithra*, are characterized by ventral hindwing bands 2 and 3 diverging from band 4 toward the inner margin, leaving a wide, open space of white scales between them. To the west, the lines become increasingly closer together until they are nearly parallel (*jugata* Stichel 1919, described from Rio Jurua, Brazil). The dorsal surface invariable. Females tend to be slightly darker in the western portion of the range.

Ecology and Behavior. In my experience, *E. clithra* inhabits the terra firme forest where the males perch at the edges of treefalls and small clearings in the late morning and early afternoon hours. Adults rest near the ground under sunlit leaves with wings closed. I have never found them common, especially the females, but judging from the long series in museums, at times they may be encountered more frequently.

Material Examined. BRAZIL: Cuiabá-Santarem km 1666, Pa, 2♂ (CJC), 1♂ (NMNH); Ariquemes, RO, 1♂ (CJC); Manicoré, Am, 1♂ (CJC), 2♂ (MNHN); Tapajós, Pa, 1♂ (MNHN); Monte Cristo, Pa, 1♂ (MNHN); Itaituba, Pa, 1♂ (MNHN); Altamira, Pa, 1♂ (MNHN); Barreiras, Pa, 4♂ (MNHN); Conceição, Pa, 8♂ 2♀ (MNHN); Amazonas, 1♂ (MNHN); Massauary, Rio Negro, Am, 1♂ (MNHN); Uypiranga, Am, 2♂ (MNHN); São Paulo de Olivença, Am, 1♂ 1♀ (MNHN); Rio Como?, 1♀ (MNHN); Manacapuru Rd., south of Manaus, Am, 1♂ (CJC). PERU: Pakitza, 20♂ 3♀ (NMNH); Iquitos, 4♂ (MNHN); Amazon Supl., 1♂ (MNHN); COLOMBIA: Putumayo, 6♂ 1♀ (MNHN); Umbria, Putumayo, 1♀ (MNHN).

Euselasia phedica (Boisduval 1836)

(Figs. 25–28, 34, 39)

Nomenclature. Boisduval named *E. phedica* from a male illustrated from French Guiana. The type is in the British Museum (Natural History).

Geographical Variation. There is no variation over the range of this species from French Guiana through the Amazon drainage north of the Amazon river to southern Venezuela. A male in the MNHN collection from "Putumayo" may be mislabeled.

Ecology and Behavior. I have no personal experience with this butterfly. However, K. Brown (pers. comm.) says that it inhabits deep primary forest, perching close to the ground under leaves on the edge of treefalls.

Material Examined. FRENCH GUIANA: Bas Maroni, 6♂ (MNHN); St. Laurent, 1♂ (MNHN); St. Elie, pk 15.5 on D21, 2♂ (NMNH); St. Jean, Maroni, 2♂ (NMNH). VENEZUELA: Cerro de Neblina, Basecamp, 140 m, 1♀ (NMNH). BRAZIL: Ypiranga, Am, 1♂ 1♀ in cop. (MNHN); Manaus, Am, 1♂ (MNHN); Obidos, Pa, 1♂ (MNHN); Rio Umary, 4♂ (MNHN). COLOMBIA: Putumayo, 1♂ (MNHN)(?).

ACKNOWLEDGMENTS

I am indebted to the curators of the museums visited, especially R. Robbins and M. Jacques Pierre at the Smithsonian and Museum d'Histoire Naturelle, respectively, for

access to their collections for the examination and loan of material; and to R. Robbins for his orientation during the preparatory phase of the project. To Keith Brown of the Universidade Estadual de Campinas, São Paulo, Brazil, my thanks for the loan of much valuable material and comments on the manuscript. I also thank Don Harvey of the Smithsonian for many helpful comments on the manuscript.

LITERATURE CITED

- BOISDUVAL, J. B. 1836. *Spécies général des lépidoptères*. Paris, Roret.
- BATES, H. W. 1868. A catalogue of Erycinidae, a family of diurnal Lepidoptera. J. Linn. Soc. Lond., Zool. 9:367-459.
- CRAMER, P. 1777. *De Uitlandische Kapellen voorkomende in de drie Waereld-deelen Asia, Africa en America*, Amsterdam, Baalde 2. 151 pp.
- HEWITSON, W. C. 1856. Illustrations of new species of exotic butterflies, selected chiefly from the collections of W. Wilson Saunders and William C. Hewitson. London. Van Voorst. L(18): p.[54].
- KLOTS, A. B. 1970. Lepidoptera, pp. 115-130. In Tuxen, S. L. (ed.), *Taxonomist's glossary of genitalia in insects*, 2nd revised and enlarged edition. Munksgaard, Copenhagen.
- LATHY, P. 1926. New species and forms of the genus *Euselasia* (Lepidoptera) in the Joicey collection. *Entomologist* 59:143-146.
- MILLER, L. D. 1969. Nomenclature of wing veins and cells. *J. Res. Lepid.* 8:37-48.
- SEITZ, A. 1913. *Die Grossschmetterlinge der Erde*. Stuttgart, Kernen. 5: pl. 121.
- STICHEL, H. 1919. Vorarbeiten zu einer Revision der Riodinidae Grote IV. *Deut. Ent. Zeit.* 1919:161-171.
- . 1924. Beiträge zur Kenntnis der Riodinidenfauna Sudamerikas VII. Nord Brasilien (Amazonas). *Zeitschrift Wiss. Ins. Biologie.* 19:245-250.
- . 1928. Lepidoptera Nemeobiidae. *Das Tierreich* 51. xxx + 330 pp.

Received for publication 1 September 1993; revised and accepted 7 January 1996.